



SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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J 91A055

EXAMINER

ART UNIT	PAPER NUMBER
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EXXON CHEMICAL COMPANY, entitled to a patent which
BAYTOWN POLYMERS CENTER was patented or described 1108
5200 BAYWAY DRIVE in 1958. Foreign country DATE MAILED: 12/14/74
BAYTOWN, TEX 77520

This is a communication from the examiner in charge of your application in the United States
COMMISSIONER OF PATENTS AND TRADEMARKS

2. Claims 1-6, 10, 11, 12 are rejected under 35 U.S.C. ☒ This application has been examined ☒ Responsive to communication filed on 4/22/99 ☐ This action is made final

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part 17 THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892. 2. ☒ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449. 4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474. 6. ☐ Notice of Correction of Drawing, PTO-1475.

Part II - SUMMARY OF ACTION

1. ☒ Claims on 1-13 are pending in the application

Gr. Addl of the above claims are withdrawn from consideration.

☒ Claims 14 have been cancelled. **143**

3. ☐ Claims _____ are allowed.

Claims 1-12 are rejected.

☒ Claim 13 is objected to

☐ Claims are subject to restriction or election requirement.

organic templating agent to silica molar ratio of 0.62 (6:6).

line 50 col. 7; . This molar ratio also anticipates instant.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

0. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

1. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

2. ☒ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☒ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on 6/20/94.

3. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1835 C.D. 11; 453 O.G. 213.

4. ☐ Other

EXAMINER'S ACTION

PTOL-325 (Rev. 2/93)

Copied from 08211873 on 03/09/2010

DATE 11-1-77

Art Unit: 1108

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7, 10, and 12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Calvert et al. (US 4,642,226).

The reference discloses a method of making zeolite beta wherein sodium aluminate, sodium hydroxide, dibenzyltrimethyl ammonium hydroxide and colloidal silica are mixed to form a gel then heated to 98°C under refluxing conditions (i.e., heated to boiling) and zeolite beta is allowed to crystallize (see lines 35-64 col. 7, particularly example 2). The reference discloses an additional step of forming a gel, however, applicants "comprising" terminology allows for additional steps.

The applicants claim 4 limitation of "sufficient organic directing agent to cause substantially complete dissolution of the silica source" is inherent in the reference disclosure of an organic templating agent to silica molar ratio of 0.62 (see line 50 col. 7). This molar ratio also anticipates instant claim 10.

Art Unit: 1108

In regards to instant claims 5 and 7, example 2 discloses the addition of NaAlO_2 to the reaction mixture during zeolite beta formation (see line 34 col. 7).

In regards to instant claim 12, example 2 discloses an OH^-/SiO_2 molar ratio of 0.34.

In regards to the claims 1-3, the reference does not disclose the various morphological properties claimed by applicants. Since the method of making disclosed by the zeolite is the patentably the same, the properties are assumed to be inherent to the product.

3. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Art Unit: 1108

Evaluations of the level of ordinary skill in the art require consideration of such factors as various prior art approaches, types of problems encountered in the art, rapidity with which innovations are made, sophistication of technology involved, educational background of those actively working in the field, commercial success, and failure of others.

The "person having ordinary skill" in this art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The evidence of record including the references and/or the admissions are considered to reasonably reflect this level of skill.

4. Claims 8 and 9 are rejected under 35 U.S.C. § 103 as being unpatentable over Calvert et al. (US 4,642,226).

As described above, the reference discloses a method of making a molecular sieve that is the same as the instant invention. The examples disclosed by the reference relied upon for the above rejection do not disclose using a solid source of silica in general or silicic acid specifically (the instant claim 8 and 9 limitations). The reference does, however, teach silicic acid to be equivalent to the colloidal silica used in the examples (see lines 63-65 col. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used

Art Unit: 1108

silicic acid as a source of silica in the method taught by Calvert et al. because silicic acid is a functionally equivalent to colloidal silica.

Note that the reference teaches the instant claim 8 limitation of vigorous stirring at col. 7 line 52.

5. Claims 1-6 and 10-12 are rejected under 35 U.S.C. § 103 as being unpatentable over Argauer et al. (US 3,702,886).

Argauer et al. teach a method of making ZSM-5 by preparing an aqueous solution of tetrapropyl ammonium hydroxide, SiO_2 and sodium aluminate at 100°C and then crystallizing at a temperature of $100\text{--}175^\circ\text{C}$ (see lines 25-26 col. 8 and lines 4-5 col. 16). The crystallization temperature overlaps applicants claimed range of $100\text{--}120^\circ\text{C}$.

In regards to claim 5, the reference teaches that aluminum and sodium are present in the synthesis mixture (see lines 25-30 col. 8).

In regards to claim 6, the reference teaches the formation of ZSM-5 (line 37 col. 8) which is an MFI type zeolite.

In regards to claim 10, the reference teaches an organic to silica molar ratio of 0.30 (see lines 30-31 col. 8). This teaching is further relied upon for the claim 4 limitation of sufficient organic "to cause substantially complete dissolution of the silica source."

Art Unit: 1108

In regards to claim 11, the reference teaches tetraalkyl ammonium cations in general and tetrapropyl ammonium hydroxide specifically (see lines 33-34 col. 2 and line 25 col. 8).

In regards to claim 12, the reference teaches an OH/SiO_2 ratio of 0.3-0.8 (see line 14 col. 16).

In regards to instant claims 1-3, the reference fails to teach a molecular sieve with each of the claimed morphological properties, however, as discussed above, the method of making the zeolite is substantially the same as that claimed by applicants. Therefore, one of ordinary skill in the art would expect that the reference product would have the same properties, lacking evidence to the contrary.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the temperature range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *in re Malagari*, 182 U.S.P.Q. 549.

6. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Serial Number: 08/211,873

-7-

Art Unit: 1108

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Sample whose telephone number is (703)308-3582. The examiner can normally be reached Monday through Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at (703)308-3823. The fax phone number for this Group is (703)305-3599.

Any inquiry of the general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 308-0661.



DRS

December 8, 1994



MARK L. BELL
SUPERVISORY PATENT EXAMINER
GROUP 1100